Claims (clean version encompassing amendments)

10. (twice amended) The method as claimed in claim 24, wherein said chelate complex is a complex of a chelant selected from the group consisting of DTPA, EDTA, DTPA-BMA, DO3A, DOTA, HP-DO3A, TMT and DPDP.

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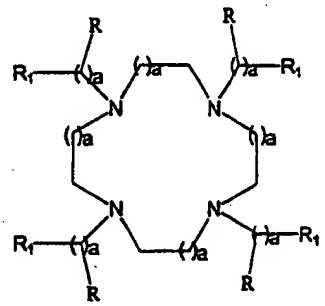
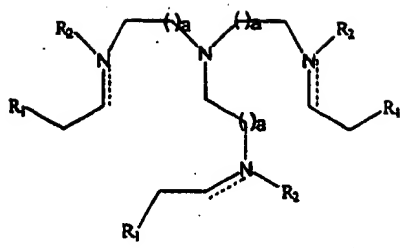
11. (twice amended) The method as claimed in claim 24, wherein said chelate complex is a complex of a chelant selected from the group consisting of porphyrins, phthalocyanins, crown ethers, hemin, heme, chelants having a square planar symmetry, cryptands and cryptates.

12. (twice amended) A method as claimed in claim 24, wherein said chelate complex is a complex of a chelant selected from compounds of formulae (I), (II), (III), (IV), (V) and (VI):



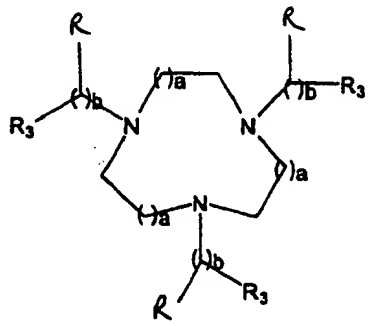
(I)

where each a independently represents an integer between 1 and 3, each R independently represents hydrogen or hydroxy and each R_1 independently represents a carboxylate, phosphate, thioacid, thiol, amino alkoxide or hydroxy group;



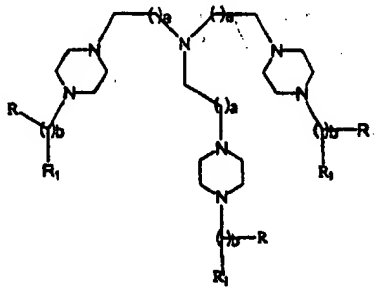
(II)

where a and R_1 are as hereinbefore defined and each R_2 independently represents hydrogen, C_{1-6} alkyl or aryl, with the proviso that R_2 is absent when the double bond is present on the same nitrogen;



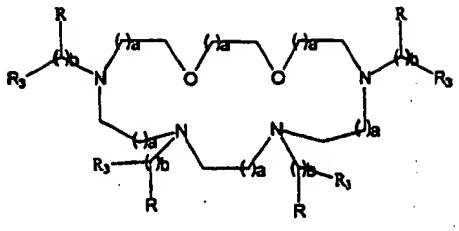
(III)

where a, R and R_2 are as hereinbefore defined, b is an integer between 0-3 and each R_3 independently represents R_1, $NR\text{-}NR_2\text{-}COO^{\theta}$, or $N{=}N\text{-}COO^{\theta}$ when b is positive or each R_3 independently represents $N{=}CH\text{-}COO^{\theta}$ or $NR_2\text{-}CH_2\text{-}COO^{\theta}$;



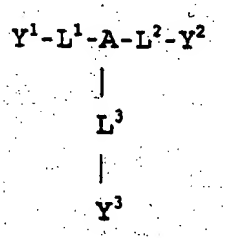
(IV)

where a, b, R and R_1 are as hereinbefore defined;



(V)

where a, b, R and R_3 are as hereinbefore defined;



(VI)

where A is N, CR_4, P, P=O, *cis,cis,cis*-1,3,5-trisubstituted-cyclohexane or an N,N',N"-triosubstituted-triaza 9 to 14 membered macrocyclic ring;

L^1,L^2,L^3 are linker groups which are independently chosen from C_{1-4} alkylene, C_{4-8} cycloalkylene or C_{4-8} o-arylene;

Y^1,Y^2,Y^3 are independently chosen from $-NH_2$, -B(=O)OZ, $-N=CR_5$-B(=O)OZ, $-NR_5$-CR_6-(=O)OZ, $-N[CR_6$-B(=O)Q$]_2$ and –O-CR_6-B(=O)OZ where B is C or PR_6, each Q is independently –OZ or $-NR_6$, and Z is H or a counter-ion;

each R_4 and R_5 group is independently chosen from H, C_{1-5} alkyl, C_{1-5} alkoxyalkyl, C_{1-5} hydroxyalkyl, C_{1-5} aminoalkyl, C_{5-10} aryl or C_{1-6} fluoroalkyl;

R_6 is OH, C_{1-6} alkyl, C_{1-6} alkoxyalkyl, C_{1-6} fluoroalkyl, C_{1-10} alkoxy or C_{5-10} aryl;

with the proviso that at least one of Y^1, Y^2 and Y^3 is $-N=CR_5$-B(=O)OZ.

13. (twice amended) The method as claimed in claim 23, wherein said contrast agent is conjugated to a biological vector capable of targeting said contrast agent to a desired region of the body.

B1 Amd.

14. (once amended) The method as claimed in claim 13, wherein said biological vector is selected from the group consisting of an antibody, an antibody fragment, and an oligonucleotide binding motif.

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23. (new) A method of detecting regions with decreased vascular perfusion in a human or non-human animal subject which comprises

a) administering to said subject an effective amount of a magnetic resonance imaging contrast agent comprising a physiologically tolerable Europium (II) compound having a first oxidation state and wherein said Europium (II) compound is oxidized *in vivo* to a Europium (III) compound having a second oxidation state and said oxidation states differ in relaxivity by a factor of at least 5, whereby contrast difference is enhanced in regions with decreased vascular perfusion in which conversion between said oxidation states occurs; and

b) generating an image of said subject.

24. (new) The method as claimed in claim 23, wherein said Europium (II) compound is a chelate complex of Europium (II) or a physiologically tolerable salt thereof.

25. (new) The method as claimed in claim 23, wherein said oxidation states differ in relaxivity by a factor of at least 10.

26. (new) The method as claimed in claim 23, wherein said oxidation states differ in relaxivity by a factor of at least 20.

27. (new) The method as claimed in claim 23, wherein said oxidation states differ in relaxivity by a factor of at least 100.

28. (new) The method as claimed in claim 23, wherein said contrast agent is conjugated to a macromolecule selected from the group consisting of proteins, polymers and liposomes.

29. (new) The method as claimed in claim 23, wherein said regions are tumours.

30. (new) The method as claimed in claim 23, wherein said regions are cardiac tissue.

31. (new) The method as claimed in claim 23, wherein said regions are in the brain.

32. (new) The method as claimed in claim 25, wherein the method is used in the evaluation of stroke.